Maricopa County

Maricopa County Vector Control

Communiqué

To: Maricopa County Citizens

From: Kirk A. Dymbrowski

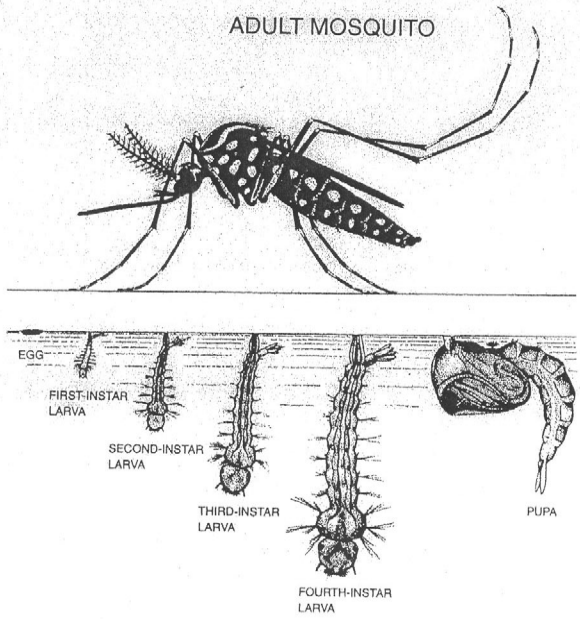
CC: Justin Finestone

Date: 7/28/2004

Re: Western Mosquito-fish (*Gambusia affinis*)

Western Mosquito-fish:

Biological control of pest species has been practiced since the 19th century. Today with a greater sensitivity to ecology and economy, biological control of pests is once again of interest. While no pesticide application is 100% effective, biological control yields many good things: Biological controls such as predators, and plants reproduce themselves, cost much less than manufactured pesticides, have little or no impact on the environment, and pests do not develop resistances to them.



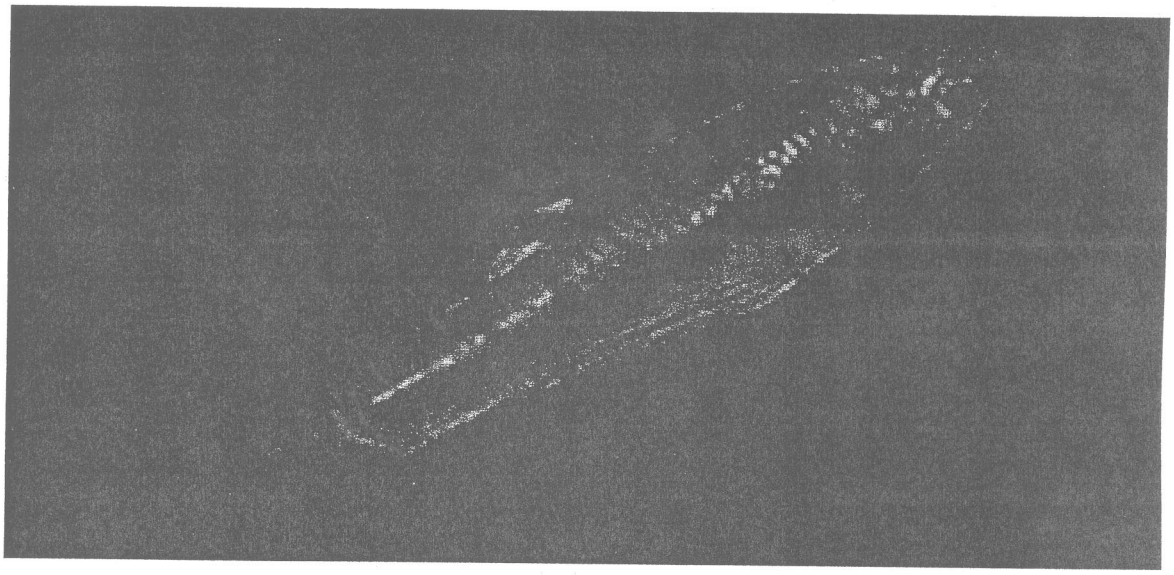
Here in Maricopa County, property owners are particularly fond of maintaining ponds, artificial streams, and tropical (high humidity) gardens. What was formerly an extremely arid desert has now become a tropical paradise. The backyard water sources and foliage have not gone unnoticed by pest species.

Can we keep the ponds without keeping the pests? Not exactly, but measures can be taken to lessen the numbers of the pest species. Biological measures can keep the costs, labor, and environmental impact to a minimum.

Mosquito Control

In areas where water is at least an inch or two deep the Western Mosquito-fish (*Gambusia affinis*) can survive, and even thrive during the hottest times of a Phoenix summer. To our benefit, *Gambusia* prefer mosquito larvae to almost any other aspect of their diet. A high rate of fecundity and hardiness allows them to replenish and even bolster their numbers, lessening the need for successive stocking of waters.

The *Gambusia* appear much like guppies, and have similar traits. The Mosquito-fish are silver on their ventral surface, with a darkened stripe or spots along the lateral surfaces. Many possess small brown or black spots on their caudal and dorsal fins. *Gambusia* live 2-3 years with the females achieving a length of 35-65mm, the males reaching 35-40mm. There is great variation of physical traits within *Gambusia* populations. The *Gambusia* are aggressive and will readily feed upon smaller fish if they can. If young or very tiny fish are to be protected from the *Gambusia* (and vice versa) some rocks and plants should be available as a retreat for the smaller fish.

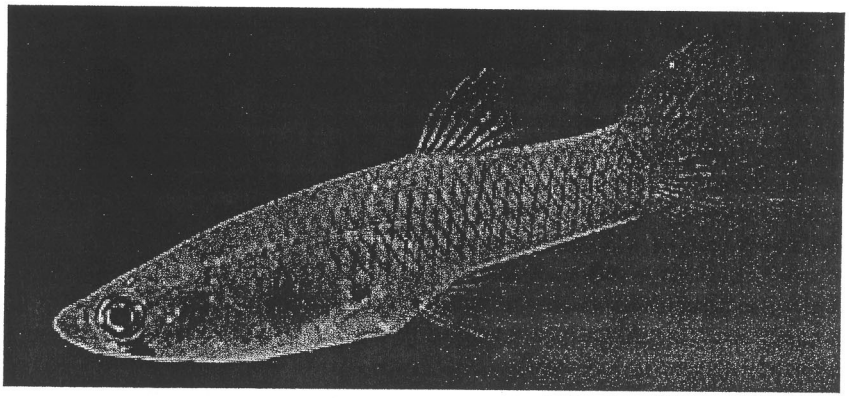


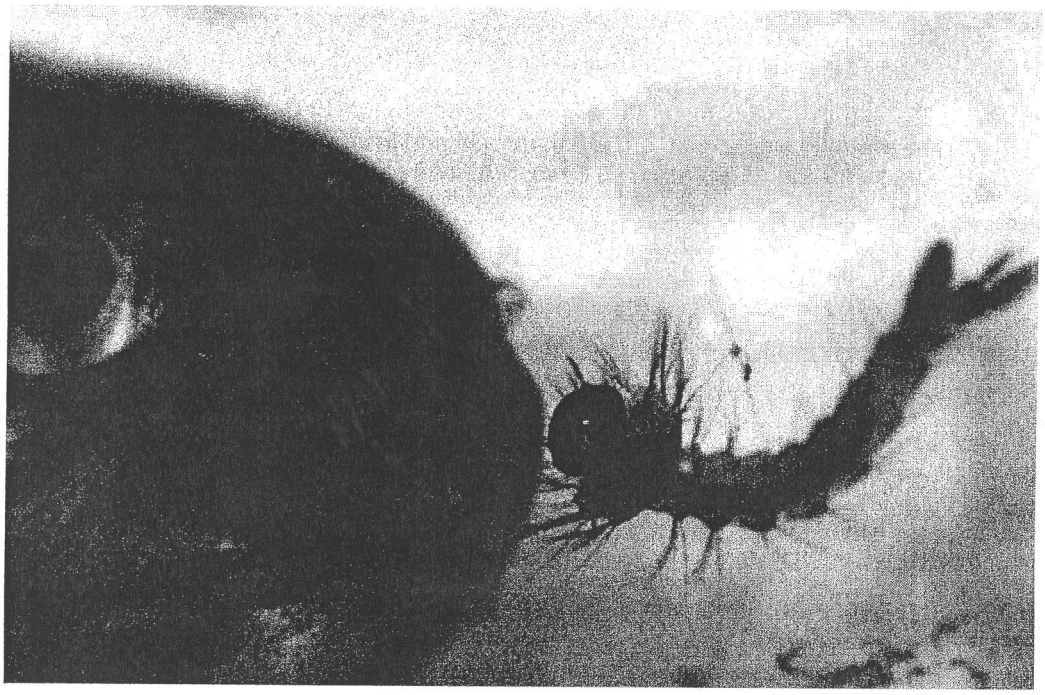
While there are many species of *Gambusia* fish, *Gambusia affinis* is the most useful in reducing mosquito numbers in our hot climate. Many governmental agencies distribute *Gambusia* as a biological mosquito control, as do some fish dealers. It should be kept in mind, however, that the Western Mosquito-fish is not native to this area and may not be released into natural bodies of water or waterways. It is illegal to transport *Gambusia affinis* across state lines without proper documentation due to the potential impact on native aquatic populations.

Mosquito-fish may be obtained for artificial ponds, puddles, or other non-native bodies of water from the Maricopa County Vector Control office. The County obtains *Gambusia* from locations where the fish has been stocked in the past. For citizens who stock pools, ponds, or run-offs with the Mosquito-fish, the County may request permission to 'harvest' a few *Gambusia* from time to time.

Citizens are encouraged to call the Vector Control office (602-506-0700) prior to picking up fish. If Vector Control has fish on hand, the citizen should bring a water-tight container to Vector Control , between 7AM and 3 PM Monday through Friday.

3343 W. Durango St. Bldg. 1921 Phoenix AZ 85009





CDC West Nile Hotline: 1-888-246-2675 (they will provide CDs, pamphlets, and videos at no cost)
AZ West Nile Hotline: 1-602-364-4500
General West Nile Info: 1-602-747-7500
Veterinary West Nile Info: 1-602-542-4293 or
1-602-230-5917
State Health Dept.: www.state.az.us
Public Health: www.maricopa.gov/public_health/
Environmental Services: www.maricopa.gov/envsvc/default.asp